



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/765,184

01/18/2001

Duane Joseph Buening

DP-300203

6840

7590

06/07/2004

MARGARET A. DOBROWITSKY
DELPHI TECHNOLOGIES, INC
Legal Staff Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

MOHANDESI, IRAJ A

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n N .	Applicant(s)	
	09/765,184	BUENING ET AL.	
	Examiner	Art Unit	
	Iraj A Mohandesi	2834	

AK

-- The MAILING DATE of this communication appears n the cover sheet with the correspondenc address --

Peri d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayashi US (5,274,322)** in view of **Robert Rosenberg** "Electric Motor Repair (third edition) Copyright 1988, Saunders College Publishing;

Hauashi'322 discloses an alternating current generator comprising; a stator (16); and a rotor (18), the rotor comprising a plurality of pole pairs (column 5, line 54) the stator comprising a first and second winding are three phase windings (10); the first and second windings are physically offset one relative to another (Fig. 6); wherein the first winding wound in one of and Y configuration (12, "121-122-123) and the second winding wound in the other one of the delta connection (10, 101 "02" 103 "); a stator comprising ; a substantially annular portion; a plurality of teeth extending radially inwardly from the annular body portion; a plurality of slots defined between said teeth; at least two winding wound around said teeth and insert in to the slots (Fig. 6) ; the windings are three phase winding (column 3, line 41, 46) the first and second winding are connected to a rectifier bridge (11, Fig. 1); the stator further comprising a plurality of teeth defining a plurality of slots; (Fig. 6) ; the first and second winding are positionally shifted from each other an electrical

angel of 30 degree (column 2,line 13-17); With respect to claim 16. Having $p=3$ (p , number of phases) the equation $90/p$ will inherently result in a 30 degree angle. However **Hauashi'322** teaches all limitation of claimed invention except only a stator comprising a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding a second predetermined number of said teeth ,said predetermined number being different than said second predetermined number.

Robert Rosenberg teaches in the "Electric Motor Repair (third edition) Copyright 1988, Saunders College Publishing ; in chapter 3 three phase electrical machine, page 163 ,164 Fig. 3-97 and 3-99 a winding pattern for a stator comprising ;a stator (n fig. 3-99 page 164)comprising a first multiple winding (system) wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second multiple winding (system) wound in a short pitch pattern with at least one complete loop surrounding an adjacent second predetermined number of said teeth ,said predetermined number being different than said second predetermined number for the purpose reducing the torque .

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine **Hauashi'322** vehicle generator with a stator having a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding an adjacent second

predetermined number of said teeth as was taught by **Robert Rosenberg** to advance an operating function while creating less torque ripple .

Response to Arguments

2. Applicant's arguments filed 08/01/2003 have been fully considered but they are not persuasive.


Robert Rosenberg teaches inherently a multi phase winding (system) pattern for a stator comprising; a stator (Fig.3-99 page 164)comprising a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding an adjacent second predetermined number of said teeth.The demonstrated teaching in **Robert Rosenberg** is generally for multi-phase winding.

Communication

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

IM September 26, 2003


BURTON S. MULLINS
PRIMARY EXAMINER